



EMS Helipad Kit

AV-HP-EMSKIT-5 & AV-HP-EMSKIT-9

Installation & Service Manual



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Version No.	Description	Date	Approved
1.0	Manual Launch	August 2010	M. Henry
2.0	Light design update	August 2014	T. Stewart
3.0	Added IR to green lights in EMSKIT-5	September	T. Stewart



Introduction

Congratulations! By choosing to purchase an Avlite light, you have become the owner of one of the most advanced LED obstruction lights in the world.

Avlite Systems draws on more than 25 years experience in the design and manufacture of navigation aids, and particular care has been taken to ensure your light gives years of trouble free service.

As a commitment to producing the highest quality products for our customers, Avlite has been independently certified as complying with the requirements of ISO 9001:2008 quality management system.

By taking a few moments to browse through this booklet, you will become familiar with the versatility of your light, and be able to maximise its operating function.

Please remember to complete the Avlite warranty registration card accompanying your light.

Technology

Avlite Systems is a world-class solar lighting systems manufacturer with a proven reputation for rapid, innovative, and agile technology solutions designed specifically for defense, government, civil and humanitarian aid operations in the most remote, toughest environments.

Electronics

Avlite employs leading in-house electronic engineers in the design and development of software and related circuitry. All individual electronic components are sourced directly by Avlite procurement staff ensuring that only the highest quality components are used in our products.

LED Technology

All Avlite lights use the latest advancements in LED (Light Emitting Diode) technology as a light source. The major advantage of LED's over traditional light sources is well established in that they typically have an operational life in excess of 100,000 hours, resulting in substantial savings to maintenance and servicing costs.

Precision Construction

Commitment to investing in the design and construction of injection-moulded parts including optic lenses, light bases and a range of other components ensures that all Avlite products are of a consistent and superior quality.

Optical Performance

Avlite manufactures a range of aviation LED lenses moulded from multi-cavity dies. The company has superior in-house lens manufacturing capabilities to support outstanding optical performance.

Award-winning, Patented Technology

Several United States and Australian patent registrations are held on Avlite's range of innovative designs, with other regional patents pending in Canada, United Kingdom and Europe.

AV-HP-EMSKIT

EMS Helipad Kit

The Avlite EMS helipad lighting kit is ideal for medivac and other emergency situations where a temporary landing area is needed and can be easily configured and deployed to suit local requirements.

The Avlite EMS Helipad Kit provides temporary lighting at emergency landing zones. The lights have a strong magnetic base to hold them securely on the steel base plates provided, preventing them from being dislodged by rotor wash. The steel plates come in high visibility aviation yellow.

The helipad lights have a minimum range of 2 miles (4km) and an autonomy in excess of 750 hours. The batteries are easily replaced by the user and the kit comes standard with high powered, readily available, air alkaline batteries.

All components are neatly housed in a sturdy storage case on wheels for easy and convenient transportation.

The kit is available in two configurations. The AV-HP-EMSKIT-5 consists of:

- 4 x steady-on green with IR helipad lights
- 1 x flashing white with IR helipad light
- 5 x steel mounting plates
- Storage case

The AV-HP-EMSKIT-9 consists of:

- 8 x steady-on green with IR helipad lights
- 1 x flashing white with IR helipad light
- 5 x steel mounting plates
- Storage case



All components are stored in a convenient, portable, easy-to-handle case

SPECIFICATIONS • *

Light Characteristics

Light Source

Available Colours

LED Life Expectancy (hours)

Electrical Characteristics

Voltage (V)

Temperature Range

Power Supply

Battery Type

Battery Capacity (Ah)

Nominal Voltage (V)

Physical Characteristics

Battery Housing

Lens Material

Lens Design

Mounting

Height (mm/inches)

Width (mm/inches)

Depth (mm/inches)

Mass (kg/lbs)

Certifications

Quality Assurance

Waterproof

Intellectual Property

Trademarks

Warranty *

AV-HP-EMSKIT

AV-HP-EMSKIT-5 Model:

4x Green/IR lights with 1 watt ultra-high intensity LED & 3x IR high intensity LEDs

1x White/IR light with 1 watt ultra-high intensity LED & 3x IR high intensity LEDs

AV-HP-EMSKIT-9 Model:

8x Green/IR lights with 1 watt ultra-high intensity LED & 3x IR high intensity LEDs

1x White/IR light with 1 watt ultra-high intensity LED & 3x IR high intensity LEDs

Green, White/IR

>100,000

6

-40 to 80°C

Air Alkaline

45

6V

LEXAN® Polycarbonate – UV stabilized

Acrylic

Total Internal Refraction

2 x magnets

180 / 7

146 / 5¾

108 / 4¼

1.5 / 3¼

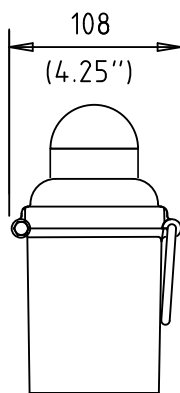
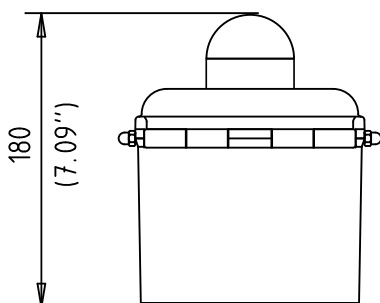
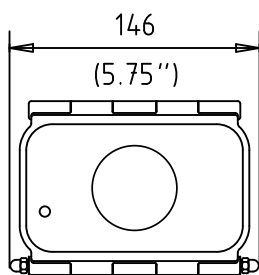
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IP67

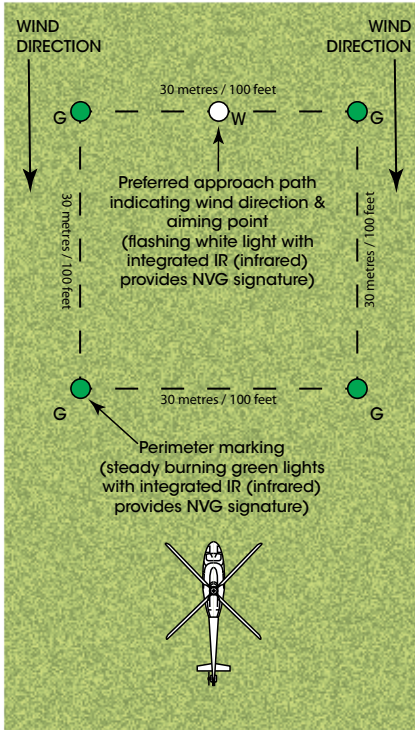
AVLITE® is a registered trademark of Avlite Systems

1 year

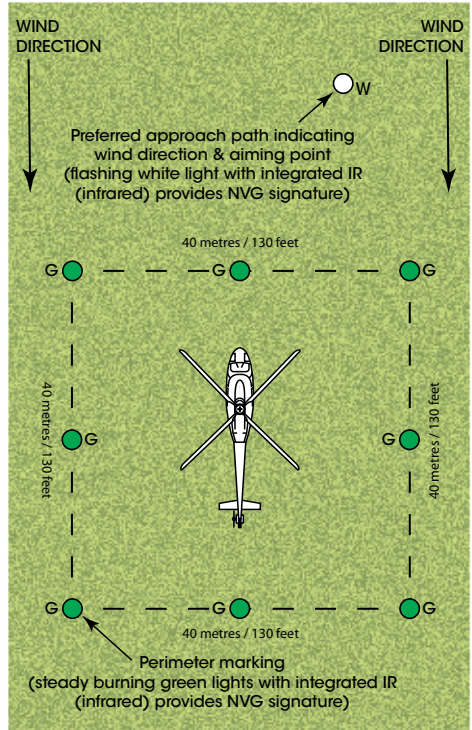
• Specifications subject to change or variation without notice
* Subject to standard terms and conditions



General EMS Helipad Layout



AV-HP-EMSKIT-5 with 4x steady-on green helipad lights & 1x white/IR helipad light

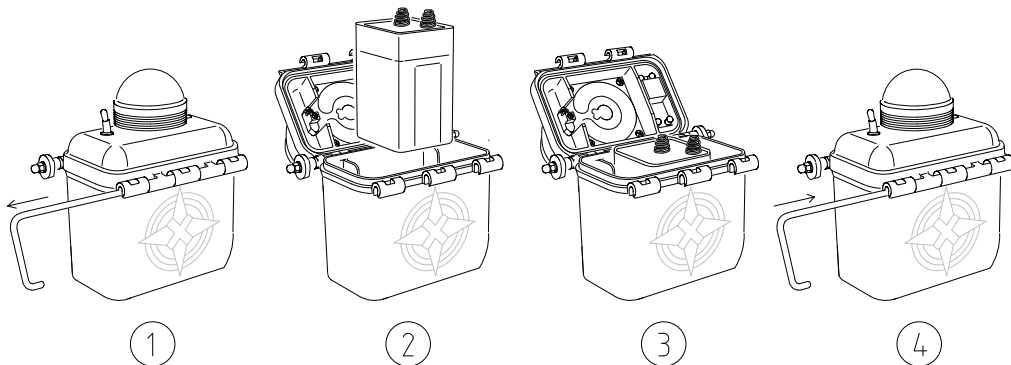


AV-HP-EMSKIT-9 with 8x steady-on green/IR helipad lights & 1x white/IR helipad light

Installation

Installing a 6V Battery

1. Remove any packing material from the light and withdraw the Locking Pin.
2. Open the Lid and insert the battery into the compartment.
3. Ensure the battery is fully inserted in the case. The terminals on the battery must be positioned at the top so they make contact with the contact plate in the lid of the light.
4. Close the lid and insert the Locking Pin.



Testing the AV-HP Light

1. Activate the AV-HP Light by turning the toggle switch to the 'ON' position.
3. If the light does not activate, check the following.

- Is the light turned on?
- Is the battery correctly installed?

Low Battery Status

The AV-HP Light will run for many nights on a single 6V Dry Cell Battery. As a number of battery brands may be used in this unit, the number of nights the AV-HP Light will operate for will vary.

The AV-HP Light will start to flash once every 10 seconds when the battery charge drops below 3.7V.

The AV-HP Light will stop operating when the battery drops below 3.5V.

Maintenance and Servicing

Designed to be almost maintenance-free, the AV-HP Light light requires minimal attention, though the following maintenance information is provided to help ensure the operation of your product.

1. Replacing the Battery – the battery used in this light will require regular replacement. This will depend on the amount of time the light is operating. To replace the battery please follow the steps set out under Installation of the AV-HP Light.
2. Removal of Discharged Batteries – please remove any discharged dry cell batteries immediately from the light to minimise the chance of corrosion and possible damage to the light.
3. Inspecting the Lid Seal – AV-HP Light uses a metric o-ring Ø118 x 3.5mm or imperial o-ring BS247. Check the o-ring periodically for any signs of deterioration. Replace if necessary.

***Always dispose of batteries in a manner that cares for the environment.
Please recycle where possible.***

Low Battery Status

The AV-HP Light will run for many nights on a single 6V Dry Cell Battery. As a number of battery brands may be used in this unit, the number of nights the AV-HP will operate for will vary.

The AV-HP Light will start to flash once every 10 seconds when the battery charge drops below 3.7V.

The AV-HP Light will stop operating when the battery drops below 3.5V.

Trouble Shooting

Problem	Remedy
Light will not activate	<ul style="list-style-type: none"> • Ensure battery is properly connected. • Ensure battery has sufficient voltage. • Check the Status LED in the light sensor port. If it is flashing the battery charge is insufficient to power the light.
Light will not operate for the entire night	<ul style="list-style-type: none"> • Battery needs either recharging or replacement.
Battery is corroding due to water in the compartment	<ul style="list-style-type: none"> • Check the rubber seal is fitted correctly. Make sure there are no cracks or holes in the seal. Make sure a silicon grease is used on the seal for added sealing. • Check the polycarbonate case for cracks or holes.
Light will not turn off	<ul style="list-style-type: none"> • Ensure the switch is in the OFF position
Light is flashing, not steady on	<ul style="list-style-type: none"> • Battery charge is low, (below 3.7V) please change battery to ensure safe operation. When the light senses a low battery it will flash for 0.5 seconds every 10 seconds.

Avlite Light Warranty V1.2

Activating the Warranty

Upon purchase, the Avlite Systems warranty must be activated for recognition of future claims. To do this you need to register on-line. Please complete the Online Registration Form at:

www.avlite.com

Avlite Systems will repair or replace your lantern in the event of electronic failure for a period of up to three years from the date of purchase.

Avlite Systems will repair or replace any ancillary or accessory products in the event of failure for a period of up to one year from the date of purchase, as per the terms & conditions below.

The unit must be returned to Avlite freight prepaid.

Warranty Terms

1. Avlite Systems warrants that any Avlite aviation products fitted with telemetry equipment including but not limited to AIS, GSM, GPS or RF ("Telemetry Products") will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of twelve (12) months from the date of purchase by the original purchaser.
2. Avlite Systems warrants that any rotationally-moulded products ("Roto-Moulded Products") and accessory products ("Accessory Products") will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of twelve (12) months from the date of purchase by the original purchaser.
3. Avlite Systems warrants that any Avlite aviation products other than the Telemetry Products, Roto-Moulded Products and Accessory Products ("Avlite Products") will be free from defective materials and workmanship under normal and intended use, subject to the conditions hereinafter set forth, for a period of three (3) years from the date of purchase by the original purchaser.
4. Avlite Systems will repair or replace, at Avlite's sole discretion, any Telemetry Products, Roto-Moulded Products, Accessory Products or Avlite Products found to be defective in material and workmanship in the relevant warranty period so long as the Warranty Conditions (set out below) are satisfied.
5. If any Telemetry Products or Avlite Products are fitted with a rechargeable battery, Avlite Systems warrants the battery will be free from defect for a period of one (1) year when used within original manufacturer's specifications and instructions.

Warranty Conditions

This Warranty is subject to the following conditions and limitations;

1. The warranty is applicable to lanterns manufactured from 1/1/2009.
2. The warranty is void and inapplicable if:
 - a. the product has been used or handled other than in accordance with the instructions in the owner's manual and any other information or instructions provided to the customer by Avlite;
 - b. the product has been deliberately abused, or misused, damaged by accident or neglect or in being transported; or
 - c. the defect is due to the product being repaired or tampered with by anyone other than Avlite or authorised Avlite repair personnel.
3. The customer must give Avlite Systems notice of any defect with the product within 30 days of the customer becoming aware of the defect.
4. Rechargeable batteries have a limited number of charge cycles and may eventually need to be replaced. Typical battery replacement period is 3-4 years. Long term exposure to high temperatures will shorten the battery life. Batteries used or stored in a manner inconsistent with the manufacturer's specifications and instructions shall not be covered by this warranty.
5. No modifications to the original specifications determined by Avlite shall be made without written approval of Avlite Systems.
6. Avlite lights can be fitted with 3rd party power supplies and accessories but are covered by the 3rd

party warranty terms and conditions.

7. The product must be packed and returned to Avlite Systems by the customer at his or her sole expense. Avlite Systems will pay return freight of its choice. A returned product must be accompanied by a written description of the defect and a photocopy of the original purchase receipt. This receipt must clearly list model and serial number, the date of purchase, the name and address of the purchaser and authorised dealer and the price paid by the purchaser. On receipt of the product, Avlite Systems will assess the product and advise the customer as to whether the claimed defect is covered by this warranty.
8. Avlite Systems reserves the right to modify the design of any product without obligation to purchasers of previously manufactured products and to change the prices or specifications of any product without notice or obligation to any person.
9. Input voltage shall not exceed those recommended for the product.
10. Warranty does not cover damage caused by the incorrect replacement of battery in solar lantern models.
11. This warranty does not cover any damage or defect caused to any product as a result of water flooding or any other acts of nature.
12. There are no representations or warranties of any kind by Avlite or any other person who is an agent, employee, or other representative or affiliate of Avlite, express or implied, with respect to condition of performance of any product, their merchantability, or fitness for a particular purpose, or with respect to any other matter relating to any products.

Limitation of Liability

To the extent permitted by acts and regulations applicable in the country of manufacture, the liability of Avlite Systems under this Warranty will be, at the option of Avlite Systems, limited to either the replacement or repair of any defective product covered by this Warranty. Avlite Systems will not be liable to Buyer for consequential damages resulting from any defect or deficiencies in accepted items.

Limited to Original Purchaser

This Warranty is for the sole benefit of the original purchaser of the covered product and shall not extend to any subsequent purchaser of the product.

Miscellaneous

Apart from the specific warranties provided under this warranty, all other express or implied warranties relating to the above product is hereby excluded to the fullest extent allowable under law. The warranty does not extend to any lost profits, loss of good will or any indirect, incidental or consequential costs or damages or losses incurred by the purchaser as a result of any defect with the covered product.

Warrantor

Avlite Systems has authorised distribution in many countries of the world. In each country, the authorised importing distributor has accepted the responsibility for warranty of products sold by distributor. Warranty service should normally be obtained from the importing distributor from whom you purchased your product. In the event of service required beyond the capability of the importer, Avlite Systems will fulfil the conditions of the warranty. Such product must be returned at the owner's expense to the Avlite Systems factory, together with a photocopy of the bill of sale for that product, a detailed description of the problem, and any information necessary for return shipment.

Other Avlite Products Available



Solar Aviation Lighting



Helipad Lighting



Obstruction Lighting



**Airfield Markers
& Accessories**

Typical Applications

- Temporary & permanent airfield lighting
- Remote, emergency & defence airfield lighting
- Barricade, hazard & perimeter lighting
- Helipad lighting
- Obstruction lighting

For a complete list of product compliances including ICAO & FAA, please contact Avlite today



Area & Sign Lighting



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